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THE SUBTERRANEAN HISTORY OF MAN.

THE methods and results of historic investigation have undergone striking changes during the present century ; and one of the most important factors in the change has been the direct resort to memorials left behind them by the unknown ages—monuments above ground and relics beneath. Sometimes these monuments themselves have been preserved by burial, natural or artificial, and have also become part of the subterranean history of mankind. So great a mass of solid historic fact has been revealed by the spade, that one is almost ready to say there is more of veritable ancient history coming and to come from beneath the ground than from above it. The results of these excavations, often curious and surprising in themselves, are important chiefly from the comparisons they enable us to make, and the connections they are slowly permitting us to establish, among the races and events of the distant past. And though each new discovery too readily becomes the occasion of some unsubstantial theory, further investigation soon extinguishes the vagary. While we cannot avoid all disputed points, we can refer to a great mass of material thus accumulated, resting on high authority.

What could seem at first more impenetrable than the darkness that hung over this country prior to its discovery, or rediscovery, four centuries ago ? Yet within a generation we have gained by exhumation a basis of facts whereby we can not only reproduce much of the life and habits of the earlier ages, but, by combining these with indications from other sources, can already reason with some probability upon the relations of the various occupants of the soil, and their migrations. Without the aid of a scrap of writing, we can say that hundreds of years, perhaps a thousand, before Columbus, probably while the mastodon was here, the area of the United States was occupied by a race much superior to the modern

Indian tribes. They were plodding and industrious, capable of great enterprises and persistent toil, constructing millions of cubic feet of embankments, thousands of mounds—ten thousand in Ohio alone—and miles of defensive works, commonly of earth, sometimes of earth and stone, and in one instance more than two miles of stone. They were cultivators of the soil, dwelling in large communities and for long periods in the fertile valleys of the interior and Western States, shrewdly pre-occupying the sites of the chief towns and cities—Chicago, Milwaukee, St. Louis, Cincinnati, Marietta, Dayton, Portsmouth, Chillicothe, etc. Their center of progress, if not of power, was apparently in south-western Illinois, where within a radius of fifty miles there were five thousand mounds, one of them, at Cahokia, ninety feet high and covering half as much ground as the Great Pyramid of Ghizeh. They manufactured pottery in a great variety of forms, using some of it for cooking; made salt from the saline springs of Illinois and Missouri; procured shells and pearl from the Gulf of Mexico, and obsidian from beyond the Rocky Mountains; brought mica in great sheets from mines in North Carolina, and red pipestone (catlinite) from the head-waters of the Missouri; quarried flint (chert) on Flint Ridge, Ohio; wrought the copper mines of Lake Superior over an extent of a hundred and fifty miles, hammering the metal into implements, ornaments, and weapons, and learning finally—in Wisconsin, at least—to smelt it. According to Dr. Newberry, they wrought the oil-wells of Canada and Pennsylvania, and, according to the State Geologist of Missouri, they dug canals in that State, fifty feet wide by twelve feet deep. Their vast public works would indicate a despotic government, and perhaps a strong priestly influence. The definite sizes, shapes, and correspondences of their circles, squares, and other inclosures and embankments, are thought to imply standards and implements of measurement. They sometimes practiced cremation, if not human sacrifice. They were a race of smokers, and lovingly carved their pipes into admirable representations of birds and beasts; and their artistic turn showed itself further in small sculptures, often from the hardest stone, of more than forty kinds of animals and birds. They wove and wore cloth, sometimes in the shape of a blouse drawn in at the waist and reaching to the knees. If they did not play “chunky,” they prepared the large sunken areas in which the Creeks afterward played the stupid game; and it requires but a slight stretch of

imagination to believe that their great earth-circles, graded ways, and high mounds witnessed the grandest processions and ceremonials. They adorned themselves with copper bracelets and necklaces of shell beads, claws, and teeth, and made whistles of buckshorn, and awls and needles of bone, horn, and copper. The diversity and extent of their agricultural, mining, manufacturing, and public works would involve a considerable division of labor. If we borrow a few circumstances from the Hochelagans (a sporadic tribe of Canada that had caught and preserved some of their traits till the visit of Cartier in 1535), we may understand that they raised maize, beans, and pumpkins, and added to these articles of food fresh fish from the streams, and probably smoke-dried fish from the lakes, wild fruits, and the various kinds of game immortalized in their carvings and pottery. Their clustered dwellings sometimes stood on straight, intersecting streets; their cultivated fields covered a hundred acres, and even three hundred; their situation on the streams suggests boats or canoes. They carefully buried their dead with ornaments and implements—seldom weapons—in cists under low tumuli, much like the British tumuli, and their distinguished dead in great mounds, sometimes seventy feet high and covering an acre and a half. They did not pass away by disease, but by hostile invasions, although syphilis had made its appearance. Cartloads of stone hammers and masses of detached copper left in the mines, would indicate a sudden abandonment. Cut off from the mines and the lakes, and subjected to incursions upon their cultivated fields, they evidently struggled hard, but receded to the south, to be merged with the Nahua or Toltec race of Anahuac, with whom their skulls and sculptured faces seem to ally them.

For the anterior history of this and the other American races we are obliged to appeal to a wider range of facts. Forty years ago Prescott expressed the opinion that “the civilization of Anahuac was in some degree influenced by that of Eastern Asia,” and Humboldt still earlier had pronounced “an ancient communication” to be “most evident,” on account of “striking analogies with the ideas of Eastern Asia,” not explicable as simply the result of the uniform condition of all nations in the dawn of civilization. These opinions, founded on a different set of premises, find a strong confirmation in the excavations of the two continents. A still wider range is thus suggested. Nilsson (in 1868), though re-

ferring the facts to "an instinctive contrivance created by a sort of natural necessity," was yet constrained to comment on "the remarkable fact of the great resemblance in the stone implements of different tribes in different periods and the most distant countries." He even asserts "a similarity, or rather identity, not only of the simpler implements of stone and bone that occur among very distant nations in the Old and New World, but also between implements more or less complicated." He cites various instances, and "above all, the small heart-shaped arrow-heads of flint from Scania, and of obsidian from Terra del Fuego, both of which are, with regard to shape and mode of construction, even in the most minute details, and when viewed with the microscope, surprisingly similar, as if they had been made by the same hand on the same day." Dr. Dawson, in his "Fossil Man," notes such correspondences as these: the ancient tomb of Knock-Maraidhe near Dublin, "the precise counterpart of the oldest American interments;" the almost exact similarity of the gouges and other stone implements of the two continents; bone harpoons similarly notched on one side, from Denmark, Kent's Cavern (England), Nova Scotia, and modern Terra del Fuego; similar bone needles from Canada, Belgium, and France; grooved hammers of the same construction from many parts of the world; skull drinking-cups of the Hoche-lagans as of the old Norsemen; the Hochelagan pottery precisely like that from an English barrow, made of clay mixed with sand and kneaded out to give it a laminated structure; the edge-marking with finger-print and nail, alike in Canadian, British, and Swiss specimens. Dr. Foster, in his "Prehistoric Man," finds a strikingly similar chevron border on three pieces of ancient pottery, from San José near Mexico, from the Shell Banks of Louisiana, and from Lake Neuchatel in Switzerland; and axes from Wisconsin, "almost exact counterparts of those found in Ireland and in the Swiss lakes." Humboldt carried home from an ancient mine in Peru a bronze chisel containing the same proportions of copper and tin (94 to 6) with one found by Wilkinson at Thebes. The Egyptian bronze, however, had usually more tin. Even the "Westminster Review" (October, 1884, pp. 536-7) remarks that "the resemblance of the human forms in the sculptures of Palenque to some Egyptian gods and priests cannot escape the intelligent reader;" and while peremptorily denying all connection of Mexico and Peru with Europe and Asia, yet speaks of the "coincidences"

and "parallelisms" between the Mexican religion and Japanese Shintoism, as "odd," "striking," and "startling." M. Mortillet has recently found the flint axes from the valley of the Delaware so like those from the valleys of the Somme and Garonne as to make it seem "probable that there was formerly a great bridge between America and Europe." Add to this the necklaces of shell-disks and of animals' teeth, alike in France and Ohio, and the recent discovery in France, Michigan, and the Canary Islands of human skulls trepanned both before and after death. These curious coincidences continually come to light. Thus Dr. Stephen Brown writes from California that he has found specimens "identical with all the stone implements figured by Dr. Schliemann in his 'Mycenæ.'" The animal figures of the Mound-builders' pottery, including the head of a pig, are matched in part by terra cotta vases found by Schliemann at Hissarlik in the form of the cat, the mole, the hedgehog, and the hog's head; though animal forms rarely occur in the pottery of Western Europe. And of the owl's-head handle of a Missouri drinking-cup, the Marquis de Nadaillac says, perhaps strongly, in his "Prehistoric America," that it is "so like those found at Santorin or at Troy that they might be mistaken the one for the other." This list could be greatly extended. Nadaillac's volume alone would add more than twenty resemblances equally striking.

Such coincidences, many of which can not well be regarded as accidental or spontaneous, when combined with other facts and with the common traditions of the two continents—as of the deluge, more or less in detail—are strikingly significant. Indeed, there is one living race on this continent, the Eskimos, between whom and the flint-men of West Gôthland and the cave-men of France, European excavations have established the closest connection. Nilsson found the old Scandinavian sepulcher in all its several great peculiarities "identical with the modern Eskimo hut," so that it seemed "scarcely possible to assume that all these various and important minute similarities should be only accidental." While he did not quite accept the necessary solution, Lubbock in 1869 saw "some reason to believe that the Eskimos once inhabited Western Europe." Mr. Boyd Dawkins, in his "Early Man" (1880), is perfectly pronounced. After reviewing all the facts, he declares the probable identity of the Cave-men of Europe and the Eskimos of America to be the only admissible hypothesis. This theory

is understood to be now somewhat generally accepted. In view of these and many correlated facts, especially the showing by many writers, from Lyell to Quatrefages, that transition by Behring's Strait is easy and not uncommon, by the Pacific quite feasible and probable, and by the Atlantic and its islands practicable, we easily frame a provisional American history thus: Successive waves of migration across Behring's Strait, dividing by the Rocky Mountains into separate lines of southward movement, variously modified by accessions from south-eastern Asia; these races and movements struck by hunting tribes from Europe by the Atlantic, driving the Eskimos and their congeners north, and the Mound-builders and their kindred southward to crowd and conquer each other there, and filling their territory with a variously modified race of savages. Future explorations, it may be believed, will reach much more definite results, and fill the outline.* We might indeed add to it now.

In Europe the researches of forty years upon fossil man have given us a moderately complete outline of centuries of unwritten history, without entering much on debatable ground or raising distinctly the question whether these types of men represent an advance or a degradation from a primitive condition and central origin. One main fact is settled, that the oldest, lowest form of manhood that the earth presents is a real manhood, with tools, ornaments, social life, and mastery of the brute world, able to capture and conquer the fleetest and fiercest of beasts. In the words of M. Joly, in his "Man before Metals," "the man who has left incontestable proof of his existence in the most ancient quaternary beds . . . was man in all senses of the word, anatomically, intellectually, morally." We can picture his life and habits, the life of the man that certainly was contemporary with the mammoth and the cave-bear, the oldest of the so-called extinct animals. Without encumbering ourselves with minor subdivisions of the so-called palæolithic age—a matter still under discussion among the ablest palæontologists—we find a man (certainly at Cromagnon and Mentone) of powerful frame and large brain. He dressed in skins, which he had sewed with sinews and a bone needle, and which he laid aside for the summer hunt, and he protected his hands sometimes with a long, four-fingered glove.

* The somewhat prevalent theory that the Indians were descendants of the Mound-builders encounters very grave difficulties.

With his barbed harpoon he captured salmon, trout, pike, carp, and even the seal. With his light arrows he brought down the crane, duck, snowy owl, ptarmigan, and other birds, great and small. With his sharp spears, daggers, and arrows he not only struck down the musk-sheep, wild horse, ox, ibex, bison, urus, and great numbers of reindeer, but mastered the bear, lion, and perhaps the mammoth—one of which he has sketched in the act of charging, with eyes set, trunk up, and mouth wide open. He sent his arrows with such force as to imbed them in the skull of the stag, and hurled his javelin quite through the lumbar vertebra of the urus as it rushed upon him. Possibly—Steenstrup and Dupont say, probably—his dog then accompanied him. That he tamed the reindeer, Quatrefages considers “an open question ;” that he had domesticated the horse, is, judging from the remains at St. Acheul, Abbeville, and Amiens, and the forty thousand specimens at Solutré, not unlikely. His winter house, but probably not his summer residence, was a cavern. He cooked his food by the fire, and made use of pottery.* Flint arrows lodged in human bones, a spear-head thrust through a human tibia, a flint axe buried in a parietal bone, a hatchet-cut in the skull of a Cro-magnon woman, who was struck with her face to the foe, betray the scenes of violence that checkered prehistoric life. The prehistoric man decorated himself at times with red paint, and ornaments of shells, bones, and teeth, and made himself whistles of the small bones of the deer. In his leisure he carved the likeness of a mastodon on its own ivory, sketched a pike, a seal, or a glove on a cave-bear’s tooth, drew a picture of the cave-bear himself on a pebble, or cut on an antler a bison, a pair of horses, a reindeer grazing, two reindeer fighting, or the hunting scene where the urus is stalked or the horse is speared. He had his traffic too. Shells from the Isle of Wight found their way to Laugerie Basse, an oyster shell from the Red Sea to the Thayngen grotto, amber from the Baltic and white coral from the Mediterranean into Switzerland, the augite of Auvergne into Brittany, the green turquoise of Brittany into the south of France, and, as many think, the nephrite of Asia into Europe. He had his manufactories of flint implements at Laugerie Haute in Perigord, Chaleux in Belgium, Hoxne in Suffolk, and Pressigny in France. The presence of the

* This has been strongly denied, largely on theoretical grounds, but seems settled by the relics at Hohefels, Robschütz, and other places.

River-Drift man is traced by Boyd Dawkins through England, France, Spain, the Mediterranean countries, Palestine, and India, to the probable center from which they swarmed, the high plateau of Central Asia.

Still more complete is the disclosure of a higher, commonly counted a later, civilization seen in the lake dwellings. These have well been called "at the same time monuments of prehistoric architecture, a zoological museum, and a gallery of anthropology." We will not dwell upon them, except to allude to the vast amount of labor expended in preparation for the dwellings, to the domesticated animals, and to the extensive range of food, including three varieties of wheat, two of barley, and two of millet; also apples, pears, cherries, and plums. These things suggest a separation from some older stock, bringing *en masse* the accumulations of the former home. Similar lake dwellings found in several other countries form a striking bond of connection extending from Scotland to Italy.

One conspicuous result of continued excavations is to correct earlier hasty generalizations. Doubts or insuperable objections are cast on several of the proposed criteria of relative or absolute antiquity. Lartet's fourfold classification of stone ages by the fauna, has been found in that form untenable. So has Mortillet's fivefold division by flint implements been reduced by himself to a threefold one, and that open to objections. Garrigou's threefold division (1, cave-bear and mammoth; 2, reindeer and aurochs; 3, polished stone, epochs), though widely accepted, is still found "somewhat arbitrary," says M. Joly. Dawkins's separation between River-Drift and Cavemen is resisted by Evans. Many definite estimates from erosions and deposits have been greatly shaken. Even the division into palæolithic and neolithic, as denoting earlier or later, has been subjected to serious questionings, on account of such conjunctions as occur at Solutré and Duruthy, and even the finding, as at Beaumes Chaudes, of the bones of palæolithic men pierced with neolithic arrows.* Wider examinations raise doubts and denials as to the supposed extreme antiquity of the circumstances and facts associated with these remains. Thus it has

* There has been much reasoning in a circle on this matter, in the steady assumption that pottery, interments, well-made flint implements, and capacious skulls annul any otherwise clear marks of the great antiquity of the deposit, and remove it from the palæolithic age.

been for some time conceded by Lubbock and others that the "extinct" cave hyena is scarcely distinguishable from the living spotted hyena of Africa. The cave bear is declared by Vogt, Brandt, Dawkins, and Gervais to be not specifically different from the brown bear of Europe; and the cave lion is pronounced by Sanford and Dawkins to be only a larger variety of the living species. Late discoveries go to show that in America the mastodon was alive much more recently than was formerly supposed, and the mammoth is thought by some to be still living in the Himalayas. The glacial age, which has been connected with man's appearance so as to carry it back hundreds of thousands of years, is maintained by late intelligent investigators to have been in America an epoch of no enormous antiquity—according to the Winchells, Prof. C. H. Hitchcock, and Dr. Andrews, from 6,000 to 12,000 years.

If we turn from the extra-historic to the early historic races, we find ourselves greatly indebted to explorations beneath the soil for the solid facts of history. When the French artillery officer, Bouchard, in August, 1799, while digging for a redoubt at Rosetta, struck a large stone of black basalt inscribed with Greek, hieroglyphic, and demotic characters, he had found the key that was to unlock the history of Egypt and has given the impulse to a remarkable movement of oriental research. It took fifteen years to make any considerable progress with the hieroglyphics. But the final result is a knowledge of the public, private, social, and religious life of Egypt, thousands of years ago, more complete and vivid than that of most intervening periods. This knowledge has come largely, though by no means solely, through subterranean investigations. The papyri have all been taken from the tombs. There also have been found the delineations of daily life in every form. The Apis mausoleum, with its store of statuettes and votive tablets, the fine temple of Edfou, the temple of Abydos with its famous tablet, were all reached by excavation. Thus too was the full structure of the Sphinx ascertained. The portrait statue of Cephrenes came from the bottom of a temple well, the tablet of Sakkára and the "Sheikh el Beled" from the grave-mounds of Sakkára, the most ancient and life-like statues of Nefert and Rah-hotep, and of Sepa and Nesa, oldest of all, from those of Meydoun, the fine jewelry of Aah-hotep from the mummy of that queen. Such is the history of a large part of the instructive Egyptian relics now found in Boulak and the museums of Europe. The spade has just

settled it that Tel el Maskhutah was not Rameses, but Pithom, and has dealt the last blow to Brugsch's theory of a northern exodus. Not unreasonably are great expectations turned to the excavations at San, for further light on the mystery of the Hyksos kings, and possibly some traces of Israel; and Mariette Bey has left on record the belief that further knowledge of the first six dynasties must be sought at the foot of the pyramids of Sakkára. Egyptian remains older than the Great Pyramid, still extant in the Sinaitic peninsula, show it to be no absurd supposition that the spade might yet reveal some imperishable relics of Israel around Sinai and Gadis, although nearly three thousand years of Amalekites, Nabatheans, monks, and Arabs would have left no vestige above ground. Important questions received some light from the excavations of Wilson and Warren at Jerusalem, and still more important historical and topographical information would probably come from further excavations, were they practicable. We wait impatiently for free admittance to the caves beneath the so-called Tomb of David at Jerusalem, and the Haram at Hebron. The site of Capernaum will be determined only by the spade.

It is almost superfluous to refer to the knowledge of Roman life, history, and art thus gained; for we think of Pompeii and Herculaneum, the Roman forums, the Palatine Hill, the baths of Caracalla and Titus, the Roman catacombs, the old church of San Clemente, and the like. From the baths of Caracalla alone came an immense number of works of art, including the Farnese Hercules, Bull, and Flora, while the Laocoon came from the Vigna de Fredis, and so on. Raphael resorted to the wall-paintings in the baths of Titus for suggestions in his work upon the Loggie; and to these and similar excavations at Pompeii, the Palatine Hill, the baths of Livia, and elsewhere, are we indebted for all our definite knowledge of classic painting. What we know of the Etruscans comes mostly from their tombs. The indebtedness of Christian archæology to the Roman catacombs is not yet fully written.

But it is in Babylonia and Assyria that we find the most remarkable instance of a well-nigh complete history recovered by excavation. From beneath the mounds of Kouyunjik, Khorsabad, Warka, Mugheir, and elsewhere, we have not only reconstructed in good degree the monarchies and their wars, but have ascertained their religion, art, science, employments, social, commercial, and

civil life, and the lines and extent of their traffic. We recover, too, a singularly copious and varied literature.

When we follow the indefatigable labors of Schliemann at His-sarlik, Mycenæ, and Tiryns, and the still later researches on the Hittite empire, we seem to be rapidly nearing the power of connecting the threads of ancient and lost history into a continuous web. Did our space admit, we might refer to the great number of buried coins that have come to light from innumerable places, some of them to determine critical or disputed points, such as the office of proconsul in Paul's time at Cyprus. For it is noteworthy how these researches are affecting the old authorities. Herodotus, Manetho Otesias, and most early writers suffer greatly by the contact; Berosus less, though we know him but in fragments. The only ancient historical authority that walks in safety down the centuries by the side of all these unexpected disclosures, and is constantly becoming vindicated from hostile criticism, is the sacred Scriptures. While, in all this vast range of research, very few authenticated facts even seem to conflict with those frank narratives, many a new discovery is coming to their confirmation. The old Table of the Nations (Genesis x.) acquires fresh interest and value. A land of Cush (Gen. ii. 13), long remanded to Africa alone, is found in Western Asia. The land of Shinar reappears in old Sumir, with its burnt "bricks for stone" and its "pitch for mortar." The life and times of Abraham fall into their proper setting, both in Assyria and in Egypt. The marauding monarchs of the East put in an appearance, and Arioch (Eriaku) dwells in Ellasar or Larsa. Belshazzar also, long lost and even denied to history, comes forth from a buried inscription, and Cyrus declares the capture of Babylon, "without fighting," to have been made on just such a riotous feast-day as the Scripture describes. The whole book of Daniel, notwithstanding one or two remaining difficulties, is found to be so suffused with Babylonian life, customs, and institutions, as to make it entirely impracticable, says Dr. W. H. Ward, to bring down the date, as has been attempted, three hundred years. And whereas the book of Judith is thus revealed a sheer invention, the book of Daniel, on its historic side, stands firmer than ever. In Egypt, where Herodotus is found wanting, Genesis steadily gains new confirmation. Von Bohlen, who assailed its historic accuracy fifty years ago, was extinguished in the encounter. And so great an authority as Mr. R. S. Poole has not

hesitated to assert, that the effort to reduce the date of these narratives many hundred years is wholly incompatible with their minute conformity to all the circumstances of the age of the Ramessides, and that the late Egyptian discoveries "emphatically call for a reconsideration" of that position. The excavation in the earth will undermine the castle in the air. And so great have been the results attained, and so vast is the range for further research, as almost to inspire the hope that at some future day the work of excavation, supplemented by monumental records, comparative philology, anatomy, and tradition, may lift the veil of mystery that overhangs so much of the past, and give a somewhat coherent history of the dispersions of the human race.

S. C. BARTLETT.